Applicants: Gieshoff, *et al.* Appl. Ser. No.: 10/556,643 Filing Date: December 11, 2006

Response to Non-Final Office Action

Page 2 of 5

AMENDMENTS

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1. (Currently amended): An exhaust-gas purification system for the exhaust gases of an internal combustion engine (2) of a motor-vehicle comprising a converter shell (6) that is arranged in the exhaust-gas system closely coupled to an engine outlet and includes a first oxidation catalyst (7) that is not part of an underfloor area of the motor vehicle, and a hydrocarbon adsorber (4) having up to 0.1g/L platinum on the hydrocarbon adsorber, wherein the platinum minimizes coking of the hydrocarbon adsorber and the hydrocarbon adsorber is arranged closely upstream of a particulate filter (5) in the underfloor area of the motor vehicle and downstream of the converter shell (6) wherein (i) the particulate filter is a wall flow filter, which is coated with a second oxidation catalyst on an entry side thereof, and (ii) the hydrocarbon adsorber and the wall flow filter are both disposed in one converter housing, wherein the particulate filter is separated from the hydrocarbon adsorber, and the engine comprises a diesel engine.
- 2. (Previously presented): The exhaust-gas purification system according to claim 1, wherein a zeolitic coating on a honeycomb body is used as the hydrocarbon adsorber, which includes a mixture of the zeolites ZSM5, DAY and comprises platinum at a concentration of 0.1g/L of honeycomb body volume as a catalytically active component.
- 3. (Previously presented): The exhaust-gas purification system according to claim 2, wherein the first oxidation catalyst includes a catalytically active coating of platinum-activated aluminum oxide or aluminum silicate on a honeycomb body.
- 4. (Canceled)

Applicants: Gieshoff, et al. Appl. Ser. No.: 10/556,643 Filing Date: December 11, 2006

Response to Non-Final Office Action

Page 3 of 5

5. (Previously presented): The exhaust-gas purification system according to claim 1, wherein the hydrocarbon adsorber comprises a storage capacity for hydrocarbons in the range between 1 and 50 g.

- 6. (Previously presented): A method of operating the exhaust-gas purification system of claim 1, wherein during operating phases of the engine with exhaust-gas temperatures at the engine outlet below 200 °C, the hydrocarbons emitted by the engine and not converted by the first oxidation catalyst are adsorbed at the hydrocarbon adsorber and the emitted soot particles are deposited on the particulate filter, while during operating phases of the engine with exhaust-gas temperatures at the engine outlet of more than 200 °C, the emitted hydrocarbons are converted by the first oxidation catalyst, and the particulate filter is regenerated from time to time, wherein for initiating the regeneration, the exhaust-gas temperature is raised by engine modifications at the site of the hydrocarbon adsorber above the desorption temperature of the hydrocarbons and the stored hydrocarbons are desorbed and catalytically burned at the second oxidation catalyst of the particulate filter to support the regeneration.
- 7. (Previously presented): The method according to claim 6, wherein the concentration of hydrocarbons in the exhaust gas is raised by post-injecting hydrocarbons into the cylinders of the internal combustion engine during the storage phases in order to increase the mass of stored hydrocarbons.
- 8. (Canceled)
- 9. (Previously presented) The exhaust-gas purification system of claim 1, wherein the first oxidation catalyst contains no zeolites or only a small amount of zeolites.
- 10. (New) The exhaust–gas purification of claim 1, wherein the hydrocarbon adsorber has an absence of components that prevent hydrocarbons stored on the hydrocarbon adsorber from being continuously burned.